

Your task is to describe and characterize waveguide modes. For your designated mode, find the electric and magnetic fields and the dispersion relation, make 2-D and 3-D plots, and make time-dependent plots and/or movies. Your report should include equations and descriptions of the E and B fields in the waveguide; pictures, movies, models, or working devices to illustrate the mode; and discussion of your results. Groups should work together, but each person must turn in a separate report. Each group will make a 5-minute oral report in the last week of class. Reports are due Friday, Nov.30 at 5pm.

Group 1: TE₁₀ Mode in Rectangular Waveguide

Coffman, Chaelim R.
Ferron, Thomas J.
Manock, Maia F.
Matthews, Bethany E.
Poulsen, Christoffer W.

Group 2: TE₁₁ Mode in Rectangular Waveguide

Atkins, Maxwell C.
Coyle, Nicholas M.
Meados, Cord A.
Stringer, Eric P.
White, Joshua R.

Group 3: TE₂₁ Mode in Rectangular Waveguide

Doty, Joshua J.
Kreitzberg, Patrick A.
Ogami, Erika A.
Schepige, Justin
Windom, Thomas H.

Group 4: TE₃₂ Mode in Rectangular Waveguide

Abelson, Alex
Auparay, Novela K.
Hermens, Bradley J.
Hollis, Kyle L.
Van Hatten, Sean E.

Group 5: TM₁₁ Mode in Rectangular Waveguide

Durkee, Elle C.
Elliott, John R.
Hicks, Jarrod J.
Norford, Benjamin B.
Snyder, Rodney A.

Group 6: TM_{21} Mode in Rectangular Waveguide

Brethower, Morgan C.

Henderson, Louise N.

Hines, Casey J.

Wardini, Jenna L.

Wiedle, River A.

Group 7: TM_{32} Mode in Rectangular Waveguide

Bramblett, William J.

Froman, David L.

Hale, Ky T.

Howorth, Benjamin B.

Stevens, Kathleen M.

Group 8: TE_{10} , TE_{11} , TM_{11} Modes in Circular Waveguide (include charge and current distributions)

Haggerty, James E.